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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,242	04/02/2001	Stephen Eisenberg	019496-001810US	2688

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EXAMINER	
BRUSCA, JOHN S	
ART UNIT	**PAPER NUMBER**
1631	

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/825,242	EISENBERG ET AL.	
	Examiner	Art Unit	
	John S. Brusca	1631	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 06 December 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See Continuation Sheet*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☐ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: *41 and 52*.

   Claim(s) rejected: *35,37,38,40,42,43,48,49 and 53*.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

J.S. Brusca 18 December 2004

John S. Brusca
Primary Examiner
Art Unit: 1631

Continuation of 5. does NOT place the application in condition for allowance because: The applicant's arguments are not persuasive.

The applicant's state on page 2 of their response that the examiner acknowledges that Choo (1994b) does not show three finger zinc finger proteins (ZFPs), however in the Office action mailed 07 October 2004 the rejection shows that the library of Choo et al. (1974b) comprises the three finger protein library of Choo et al. (1974a).

The applicants state on pages 3, 5, and 6 that the three finger ZFPs of Corbi et al. or Isalan et al. are not obvious to add to the database of Choo et al. 1994a) because the binding specificities of the ZFPs of Corbi et al. and Isalan et al. are not selected for in either of the Choo et al. references. However it would have been obvious to add any and all data of known ZFPs to the database of Choo et al. (1994a) to allow selection of zinc fingers with specificity for any desired target site. Choo et al. (1994a) show use of their library for selection of binding specificities to a wide array of target sites as shown in figure 2. Choo et al. (1994b) shows use of data of binding site specificities of ZFPs to design a mini library of designed ZFPs on page 642-643 with a specificity different than that of Choo et al. (1994a). The data from the first library screen of Choo et al. (1994b) is not shown but would be inherently equivalent to the data of the database generated in Choo et al. (1994a).

The applicants state on page 3 of their response that the database of Choo et al. (1994a) does not show data of three fingers of a ZFP. Although the data in figure 2 of Choo et al. (1994a) only details the sequence of a portion of the second finger of members of the library, Choo et al. (1994a) makes clear that the ZFPs are three finger ZFPs on page 11164, column 2, and that the structures of all three fingers are known for each selected member of the library listed in figure 2. It would have been obvious to list the sequences of all three fingers of each ZFP analyzed in the library to provide a complete description of each ZFP, especially to facilitate comparison to other ZFPs that have first and third fingers that differ from the library used by Choo et al. (1994a).

The applicants state that there is no motivation in the applied references to automate by use of computer storage, display, and analysis of the database. However it is obvious to automate such analysis by use of computers to store the data and display and search the data to facilitate analysis of large databases. Choo et al. (1994a) shows on page 11164, column 2 that their library comprises 2.6x10e6 members and has the potential to generate a large number of selected clones that would be entered into a database. In addition it would be obvious to add other ZFPs known in the prior art to the database to allow for selection of zinc fingers with a wide diversity of specificities and with a variety of alternative structures for use in designing ZFPs by the method of Choo et al (1994b).

The applicants state on pages 6-7 of their response that Isalan et al. teaches away from the claimed invention (as recited in claims 37, 42, and 43) that requires that the database include positional information for each zinc finger and that the position is conserved in any ZFP produced by the method. However Isalan et al. shows in the abstract, figure 1, and throughout that three finger ZFPs have interactions between neighboring fingers and the target sequence that affect binding specificity. Isalan et al. screened libraries of ZFPs with randomized finger sequences in a manner similar to Choo et al. (1994a). Isalan et al. show in figure 3 a database of selected ZFPs in which the second and third finger positional information is retained. Isalan et al. conclude on page 12032 that selection of adjacent pairs of fingers allows for design of ZFPs that bind to target sequences of desired specificity. It would therefore be obvious to generate databases that retain positional information of fingers of ZFPs and to retain positional information of pairs of fingers when designing ZFPs to retain the binding specificity of the zinc finger pairs in the designed ZFP.